



HELENA NATIONAL FOREST, HELENA RANGER DISTRICT WARM SPRINGS TAILINGS REMOVAL PROJECT

May 2013

PROJECT DESCRIPTION & BACKGROUND

The Warm Springs Tailings were produced by a historic milling facility which operated during the 1930's in support of mines located within the Middle Fork Warm Springs Creek drainage such as the Newburgh and White Pine mines. A by-product of flotation processes, approximately 35,000 cubic yards (cy) of fine-grained sand to silt sized tailings were slurried to four tailings impoundments (TA 1-4). Subsequent breach of the impoundments by the creek has left the tailings in a physically unconfined and erodible condition.

Several metals present in the tailings exist at concentrations above recommended clean-up levels for human health and the environment, specifically arsenic, lead and zinc. Interaction of the tailings with localized surface water and groundwater results in various water quality standards being exceeded (both human and aquatic life standards).

The U.S. Forest Service (USFS) initiated the Warm Springs Tailings Removal Project in 2001 in accordance with delegated authorities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Full removal of the tailings to an onsite repository was the selected alternative. The project was scheduled for construction in 2003, however funding was lost due to national fire suppression costs. Available federal funding has been secured to revitalize the removal project in 2013.

PROJECT LOCATION

The Warm Springs Tailings Removal Project site is located approximately six miles southeast of Clancy, Montana. The Warm Springs Tailings lie solely on National Forest System (NFS) lands administered by the Helena National Forest; located in the Middle Fork Warm Springs Creek drainage of the Elkhorn Mountains. The legal description of the project site includes: Section 30, Township 8 North, Range 2 West (Tailings Site); and Section 24, Township 8 North, Range 3 West (Repository Site); in Jefferson County.



Tailings Area 3 (TA-3), breach at center of view



Middle Fork Warm Springs Cr., upstream view of TA-3 breach

For Additional Project Information Contact:

On-Scene-Coordinator

Beth Ihle, USFS

bihle@fs.fed.us

(406) 266-3425

or

Helena District Ranger

Heather DeGeest

hdegeest@fs.fed.us

(406) 495-3924

<http://www.fs.fed.us/r1/helena/>

CONTAMINANTS OF CONCERN

The total volume of mill wastes contained in the tailings impoundments is approximately 35,000 cy. The tailings exhibit elevated levels of arsenic, cadmium, copper, lead and zinc. Localized contamination of surface water, groundwater and soils can in part be contributed to interactions with the tailings.

Primary contaminants of concern (impoundment concentration ranges):

Arsenic: 1059-4554 mg/kg; Lead: 372.5-1097 mg/kg; Zinc: 528-691 mg/kg

PROPOSED REMOVAL ACTION

Project actions will involve: the excavation and hauling of the 35,000 cy of mill tailings to an onsite repository to be constructed on NFS land, located approximately 1 mile west of the tailings impoundments; and the subsequent reclamation of the removal area to a stable valley bottom condition. The project will require two construction seasons (Phases I & II): Phase I will include repository construction and partial removal of the tailings (TA-3&4; 31,000 cy); Phase II will include completion of tailings removal (TA-1&2; 4,000 cy), final reclamation of the stream channel and floodplain in the removal areas, and final closure of the repository. Additional activities include grate installation at an unsecured abandoned mine opening, ongoing weed management, and long-term post-reclamation monitoring.



Surface run-off transport of fine-grained tailings to stream, TA-3



TA-2, floodplain tailings deposit (1.5 ft. depth, marked)

BENEFITS OF REMOVAL ACTIONS

Historic mining and milling activities left their mark within the Middle Fork Warm Springs Creek drainage, visible today as discharging mine adits, waste rock piles, and mill tailings impoundments that continue to affect the environment.

While this project will not resolve all of the mining-related issues present in the drainage, implementation of this removal action by the USFS will effectively reduce or eliminate the human health risk posed by the mill tailings at the project site and reduce the threat to the environment.

Removal of the tailings will reduce the exposure risks to Forest-users and recreationists. Additionally, future contamination to the Middle Fork Warm Springs Creek due to the tailings would be reduced by the prevention of further failure of the impoundments, and reduction in the availability of tailings material to the creek.

The physical safety hazards presented by an abandoned mine opening located on NFS land adjacent to the project site will also be addressed.

